

IN THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) A method of transmitting data over a wireless channel comprising: receiving convolutionally encoded data to be transmitted over the wireless channel; and ~~enhancing the transmission of the data by further~~ repetition encoding the data, wherein a repetition rate associated with the repetition encoding is set to one of a plurality of possible rates.
2. (Previously presented) A method of transmitting data over a wireless channel as recited in claim 1 wherein the data is repeated in the frequency domain.
3. (Previously presented) A method of transmitting data over a wireless channel as recited in claim 1 wherein the data is repeated in the time domain.
4. (Previously presented) A method of transmitting data over a wireless channel as recited in claim 2 further including masking the data to reduce its peak to average ratio.
5. (Previously presented) A method of transmitting data over a wireless channel as recited in claim 1 further including masking the data by applying a pseudorandom sequence.
6. (Currently amended) A method of transmitting data over a wireless channel as recited in claim 1 wherein the data is encoded using an ~~IEEE 802.11a/g~~ IEEE 802.11 standard a and IEEE 802.11 standard g encoder.
7. (Previously presented) A method of transmitting data over a wireless channel as recited in claim 1 wherein the data is interleaved after repetition encoding whereby a need to pad the data prior to interleaving is reduced.
8. (Currently amended) A method of receiving data over a wireless channel comprising: receiving convolutionally encoded and repetition encoded data via the wireless channel;

combining the repetition encoded data to produce combined data, wherein a repetition rate associated with the repetition encoding is one of a plurality of possible rates; and
decoding the combined data.

9. (Previously presented) A method of receiving data over a wireless channel as recited in claim 8 wherein the combined data is decoded using a Viterbi decoder.

10. (Previously presented) A method of receiving data over a wireless channel as recited in claim 8 wherein the repetition encoded data is repeated in the time domain.

11. (Previously presented) A method of receiving data over a wireless channel as recited in claim 8 wherein the repetition encoded data is repeated in the frequency domain.

12. (Previously presented) A method of receiving data over a wireless channel as recited in claim 8 wherein the received data is further encoded by a pseudorandom mask, further including removing the pseudorandom mask.

13. (Currently amended) A method of receiving data over a wireless channel as recited in claim 8 wherein the convolutional encoding conforms to the ~~IEEE 802.11a/g standard~~ IEEE 802.11 standard a and IEEE 802.11 standard g convolutional encoding.

14. (Previously presented) A method of receiving data over a wireless channel as recited in claim 8 further including deinterleaving the data before combining the data.

15. (Previously presented) A method of receiving data over a wireless channel as recited in claim 8 wherein the repetition encoded data is repeated in the frequency domain on subchannels, and wherein combining the repetition encoded data to produce combined data includes compensating for the effect of each subchannel.

16. (Previously presented) A method of receiving data over a wireless channel as recited in claim 8 wherein the repetition encoded data is repeated in the frequency domain on subchannels and wherein combining the repetition encoded data to produce combined data includes weighting data received on different subchannels according to the quality of the subchannels.

17. (Previously presented) A method of receiving data over a wireless channel as recited in claim 8 wherein the repetition encoded data is repeated in the frequency domain on subchannels

and wherein an aggregate channel quality estimation is made for bits included in the combined data and wherein the aggregate channel quality estimation is used by the Viterbi to determine a maximum likely transmitted data sequence.

18. (Previously presented) A method of receiving data over a wireless channel as recited in claim 8 further including estimating a phase offset using the received repetition encoded data.

19. (Previously presented) A method of receiving data over a wireless channel as recited in claim 8 further including estimating a phase offset using the received repetition encoded data by making a hard decision and determining a hard decision corrected signal.

20. (Previously presented) A method of receiving data over a wireless channel as recited in claim 8 further including:

estimating a phase offset using the received repetition encoded data by making a hard decision and determining a hard decision corrected signals; and

filtering the estimated phase offset using a median filter.

21. (Currently amended) A system for encoding data for transmission over a wireless channel comprising:

a convolutional encoder configured to convolutionally encode data to be transmitted over the wireless channel; and

a repetition encoder configured to ~~enhance the transmission of the convolutionally encoded data by further repetition encoding~~ encode the data, wherein a repetition rate associated with the repetition encoding is set to one of a plurality of possible rates.

22. (Previously presented) A system for encoding data as recited in claim 21 further including an interleaver.

23. (Previously presented) A system for encoding data as recited in claim 21 further including a masking processor configured to superimpose a pseudorandom mask on the repetition coded data.

24. (Currently amended) A system for receiving data over a wireless channel comprising:

a receiver configured to receive convolutionally encoded and repetition encoded data via the wireless channel;

a data combiner configured to combine the repetition encoded data to produce combined data, wherein a repetition rate associated with the repetition encoding is one of a plurality of possible rates; and

a decoder configured to decode the combined data.

25. (Previously presented) A system for receiving data as recited in claim 24 further including a deinterleaver configured to deinterleave the combined data.

26. (Previously presented) A system for receiving data as recited in claim 24 wherein the decoder is a Viterbi decoder.

27. (Previously presented) A system for receiving data as recited in claim 24 further including a mask remover.

28. (New) A system for receiving data as recited in claim 24 further including a phase offset processor configured to determine a phase offset by making a hard decision and determining a hard decision corrected signals.